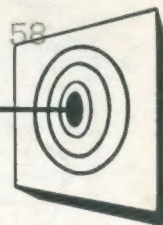


*Precision*

Feb. 58



# SHOOTING

VOL. 2, NO. 3

SINGLE COPY 25¢—\$3.00 A YEAR

JULY 1957



The Murrysville Rifle Club's eight point protected firing line for ISU Free Rifle shooting at their range in western Pennsylvania. A "Pre Camp Perry Warmup" .22 caliber 50 meter, full ISU course, match is scheduled on this range in early August.

*a magazine for Shooters by Shooters*



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## ANOTHER NEW RANGE

Dear Phil:

Hardly an issue of "Precision Shooting" goes by without someone deploping the lack of range facilities in many parts of the country. There can be no question that this is not a serious problem in many places, but I believe a solution can be found if enough serious shooters are willing to work together. Perhaps an example would help explain what I mean.

For over 30 years the Capitol City Rifle & Pistol Club of Topeka, Kansas, had the use of some state property for a smallbore range. Early this year, we were advised by a representative of the Kansas Board of Social Welfare that we could no longer use this property. This left us with 3 alternatives. 1) Confine all club shooting to indoor ranges that we could use; 2) Attempt to lease another range site; 3) Buy our own property and build our own ranges.

The first alternative could not be considered as it would greatly curtail our present activities. The second alternative had possibilities, but it would mean that we might have to pay a high rental and that we could very well lose our investment when the lease expired. This left the third alternative which was the one we decided upon.

After some months of searching and negotiating, we finally obtained a 40 acre tract that is ideally situated for our purpose. A high hill is located in the Northeast corner of this property and all firing will be in that direction. Except for the ranges, most of this land is covered with trees, providing plenty of shade and a fine place for picnics or camping. We are constructing three ranges: a 25 point pistol range, a 6 point .30 cal. range with points at 200 and 500 yards, and a 30 point smallbore range. When these ranges are completed, and that should be soon, we will have one of the best privately owned ranges in the Midwest. We are justly proud of this range, but it may never have come about if we were not put off the state property.

What too many shooters may not realize is that the only way we can promote interest in shooting is through proper facilities. Since our club has acquired the new range, we have doubled our membership! A great many of our new members are not competitive shooters, but people who would like to have a safe place to shoot their hunting rifles or to fire Gramp's old muzzle loader. Many of these same people are respected citizens who, shooters or not, are a valuable asset to any organization.

We all recognize the need for more interest in shooting, but you cannot get INTEREST without FACILITIES—the two are inseparable! The need for more and better ranges can only be provided for by local clubs, and it's time we recognized this fact. I am convinced that if more clubs would stop relying on the good graces of Police Departments and Military organizations and go out and get their own ranges, we would experience a great revival of shooting interest.

James W. Scoville

## DOES THE N. R. A. REALLY OPPOSE ANTI-GUN LAWS?

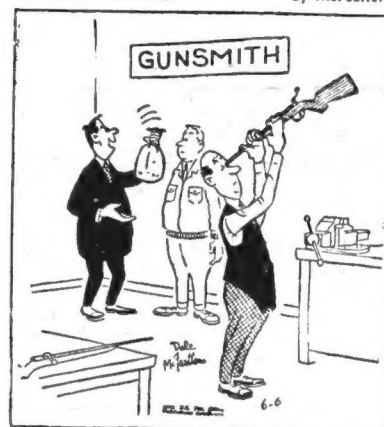
I've been a member of the N. R. A. since 1934, a lifer since '42, and an Official Referee for them for quite a few years. During that time I've had the honor of officiating at quite a number of matches within my locality ranging from small indoor rifle shoots to Sectionals with registrations past the hundred mark. During all this time I've never had a dispute with anyone; have never had any complaint lodged against me, and believe that I have always conducted myself in an exemplary manner. I have refused to officiate at just one match because a prior commitment made it impossible. I have accepted many Saturday assignments to put in long hours for the Official Referee's \$5 a day and lost \$35 by absenting myself from my regular employment. Over the years this actual monetary loss has run into the hundreds of dollars. I honestly believe that I've served the Association honestly, fairly and sincerely.

I also happen to be an official of a Statewide Writers Association, and editor of their monthly newsletter. Whenever bad gun legislation has been proposed either locally or in the State legislature, I've vigorously opposed it with every honorable means at my command. About three years ago a District Attorney in the State's largest City attempted to push gun legislation along the lines of the notorious New York Sullivan Law through the State Legislature. At the same time some Police Officials of the same City gave out "News Releases" advocating such legislation. It was very apparent that the Police and the District Attorney were acting in collusion in attempting to drum up support for the bill. It was my pleasure to blast this combine pretty well throughout the State. I also was able to get good publicity against the legislation and for the Association in the local papers. I am proud to say that the legislation never reached the floor of the house and died with the adjournment of the Legislature. It has never reappeared. Periodically I've blasted such legislation in our Newsletter to the Writers statewide, just to keep them aware of the situation. I don't know that it helped, but the State Fish and Game Commission was ready a year ago to have a bill on carrying of guns in automobiles introduced, but thought better of it and let it drop. I only heard of this after it had passed by.

Within the immediate vicinity of where I live is situated a Revolver Club. This Club was originally formed by the amalgamation of a Police and a Civilian Club, with the Police element dominating it ever since. This Club holds several important matches a year, including usually a regional and the State Championships. Because I was the nearest resident Official Referee of the Association, I was assigned to these matches. I

STRICTLY BUSINESS

by McFeathers



"Watch this!"  
 (Courtesy of The Boston Herald)

think I did a good job—at least many of the competitors told me I had. I was proud of the assignments.

But—since I've squelched, or at least had a good part in squelching some of their dilly ideas about who should own guns, little by little I've been avoided in these assignments. I feel sure that this year I won't be asked to officiate at one of their shoots. The Association has instead, brought in referees from over a hundred miles away to cover the matches. I wrote to one man at Association Headquarters and asked him if there had been any complaint against me. He wrote back and said that my record with the Association is entirely clear, that no complaint of any kind had ever been made against me. But—I'm passed over. To me the implication is clear. Somebody has gone to somebody in the NRA and said that I wasn't acceptable and somebody in the NRA has gone along with somebody. As far as I'm concerned, the NRA likes to make a big grandstand pose against guns, but when the chips are down, when the Police of a big city don't want a referee who opposes their silly anti-gun legislation, the Police get their way. And so I ask, does the N. R. A. really oppose anti-gun laws?

A. N. Onymous.

(Editor's note: The writer of the above item has been known to the Editor for several years. His positions with the State Writers organization and his efforts in opposition to undesirable gun legislation are facts. His speculations and opinions are his own and may or may not be soundly founded. We are aware that some prize boners have come out of Washington, D. C. However, the Editor has pulled too many boners himself to make him feel at all competent to set himself up as "His Brother's Keeper.")

The 8th annual Virginia outdoor position championship, ISU smallbore course, had 28 competitors, 12 of them a USA squad from Fort Benning. Lt. Verle Wright won with 1148, D. B. Puckel USA 2nd with 1147.

## JUNIOR RIFLE CLUB INSTRUCTORS

If your club needs to earn money to help meet expenses we have a plan which we think will help on that if your members are willing to do some work. If interested, write for full particulars to:

PRECISION SHOOTING, INC.  
 83 Eastern Avenue, St. Johnsbury, Vt.

## COMING MATCHES

(We will list place, date, type and title of match, name of sponsoring organization, name and address of contact person, at a nominal flat rate of \$2.00 per insertion, prepaid with insertion order. Insertion orders must reach the Precision SHOOTING office, 83 Eastern Ave., St. Johnsbury, Vt., at least 45 days before date of match for single insertion orders. For multiple insertions, 30 days additional must be allowed for each additional insertion desired.)

**MURRYSVILLE, PA.:** Sat. and Sun. Aug. 3 and 4; Camp Perry Free Rifle Warmup; full ISU International course with smallbore rifle at 50 meters; protected firing point; entry fee \$3.00; further information from William R. Funk, R. D. 1, Box 2, Murrysville, Pa.

## THE SWEANY OPTICAL BORE SIGHT COLLIMATOR

By Creighton O. Audette

For the past couple of months I have been testing a Sweany Optical Bore Sight Collimator. It is one of the handiest gunsmith tools I have yet seen and an invaluable aid in the installation of iron and scope sights and in sighting-in rifles.

The outfit consists of an aluminum housing containing lenses, cross-hairs and a plastic diffuser. The bottom of the housing has an offset containing a vee groove and a clamp. Interchangeable spuds for different calibers can be placed in the vee groove. These spuds contain a brass friction spring and are accurately ground for the different calibers.

In use, the proper spud is installed and clamped in the vee groove and the unit then placed in the line of sight by inserting the end of the spud into the muzzle. The tension spring holds the unit upright. Since the cross hairs are set at the focal point of the large lens, their optical position remains unchanged when looking through the lens from different points and it is not necessary for the unit to be accurately aligned in the line of sight. The cross hairs are adjusted so that they are optically parallel in both planes with the vee groove on the housing and consequently with the spud and the rifle bore. (Once this adjustment is made it is permanent unless the unit is dropped or bumped. The adjustment, itself, is quite simple and instructions are provided with the unit.)

Since the cross hairs are now optically parallel with the bore in both planes it follows that aligning the rifle sights or telescope reticule on the collimator cross hairs will place the line of sight parallel to the bore in both planes. Since the spud is a close fit in the last few inches at the muzzle and these largely determine line of bullet flight, the collimator is a great deal more accurate than usual bore sighting methods. It has the added advantage of being usable in all guns including the solid breech models, such as the 99 Savage, and usable any time indoors or out without a clamp to hold the gun or a target to bore-sight on. Only the gunsmith who has done a lot of scope mounting on rifles like the 99 Savage and who has fiddled and fumed with clamps and reflectors will fully appreciate this.

Allowance does have to be made for barrel whip and once in a while a completely unpredictable gun is encountered where a crooked barrel, a barrel with a lot of residual stresses or one with a non uniform wall thickness assumes a position, at the time of bullet exit, widely

## THE NINETEENTH ANNUAL

# DAMARISCOTTA LABOR DAY RE-ENTRY SHOOT

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Top prize is a Model 37 Ithaca 12 ga. Repeating Shotgun. Other prizes are valuable and useful shooters' items—a total of thirty USEFUL prizes.

Not just a shooter's holiday, the whole family can enjoy themselves in this friendly old Maine coastal town. DON'T MISS IT!

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LINCOLN COUNTY RIFLE CLUB, M. L. Tilton, Sec., Jefferson, Maine

divergent from its normal position. A little experience helps and I suggest checking back on the first few rifles with the collimator after sighting-in and making notes on the required correction factor. .22 rim fire rifles are usually very close at 50 yards when the sights are aligned slightly below the collimator cross hairs. The same setting with .22 center fires with good barrels has several times put me inside the ten ring with the first shot at 100 yards. Whip varies with the caliber and individual barrel but most factory guns of a certain model and caliber have generally similar whip characteristics. A little practice and most of the rifles will be inside the 6 inch bull at 100 yards on the first shot. I would say that average accuracy of the placement of the first shot is at least twice as good as other methods.

The price of the collimator may discourage some individual buyers, but the gunsmith doing sight and scope mounting can hardly afford to be without one. It is a precision instrument. With a reasonable volume of this work the savings in time alone will pay for the collimator in the first year of use and with care the instrument will last a lifetime.

(Editor's note: Creighton Audette is a practicing gunsmith in Springfield, Vt. (formerly at Windsor) with a large volume of work in both general gunsmithing and fine rifle building. He is a personal friend of long standing. He does not give approval to any item unless he is personally quite convinced it is as good as he says.)

## USE THE CATALOGUES

The catalogues of manufacturers and dealers of arms and accessory shooting equipment make good reference material and are of particular value to those many shooters who live in the smaller communities where many of the shooting specialties are not conveniently available in the local stores. Make use of the catalogues—that is what they are printed for. Some of them have a small nominal cost but are worth it.

Gil Hebard Guns, Knoxville, Ill., specializes in arms, accessories and services for the target handgun shooter. Gil Hebard is himself a widely known and very competent competitive handgunner. In addition to the listing of items for sale, the catalogue he puts out has much interesting and worthwhile information. The "Fundamentals of Pistol Marksmanship" by Wm. Joyner, U. S. Border Patrol pistol instructor, is as clear, concise and sound a short course in pistol shooting as this writer has seen—really worthwhile for the beginner handgunner and would do no harm for many beyond the beginner stage. Also dope on custom handguns and handloading pistol ammo which is good.

WAS-DEN Sporting Goods at Northampton, Pa. specializes in handloading supplies and components, particularly for the rifleman, and their newest catalogue is a good one to have.

Freeland's Scope Stands, Rock Island, Ill., which has a good gunsmithing department and manufactures many of its specialty items for target shooters, puts out a catalogue worth having. Al Freeland is a competent smallbore target shooter himself and is in constant personal touch with the shooters to know their desires and needs.

Many other firms put out catalogues worth having. We recommend the catalogue habit for keeping up to date on what is available in shooting supplies.

Ted Kindel, Grand Rapids, is new Michigan State Hi-Power rifle champ, winning in a tournament featured by tough weather conditions.

Entries in Hi-Power rifle matches appear to be increasing, generally and quite noticeably. Much greater participation by Service shooters is an important factor but civilian competitors appear to be increasing as well. Hope for government assistance for civilian National Match teams is no doubt another spur to civilian shooter interest.

Twenty-third Annual

MAINE STATE SMALLBORE RIFLE TOURNAMENT  
SUNDAY, AUGUST 4, 1957 AT DAMARISCOTTA, MAINE

Registered Tournament—Trophies—Cash—Merchandise Prizes  
For Programs, write: Paul Winslow, Norridgewock, Maine





The 200 yard firing line at Camp Bowie, Brownwood, Texas, with competitors firing the standing match in the State High Power Rifle Championship aggregate, May 24-25-26, 1957.

## THE TOURNAMENT CIRCUIT

### TEXAS STATE HI-POWER CHAMPIONSHIP

On May 24 the big bore shooters of the Southwest gathered at Camp Bowie Range, Brownwood, Texas for the annual firing of the Texas State Rifle Association Big Bore Championship Match, a three day tournament. There were 115 competitors, making this the largest state championship on record.

The Army participated in this year's tournament more than ever before. The All Army Advanced Marksmanship Unit from Fort Benning, Georgia journeyed some 900 miles to compete, and did not make the trip for "nothing." The Army competitors took their share of the winnings, with Lt. J. D. Martin posting the high state championship aggregate score of 442-54V for the 90 shot course. Martin also won both rapid fire matches with possible scores, 100-16 at 200 and 100-15 at 300 yds.

If ever there was any doubt that the M1 Garand could be made to shoot well, that doubt should be pretty thoroughly dispelled in the Southwest as most of the matches were won with it, except the 100 yard match. The Army competitors for the most part used the M1. Many of the Army competitors used the M1 for the 1000 yard match with several possible scores resulting.

Lt. O. J. Beck won the 15 shots at 600 yards, prone, any rifle, any ammunition, with a 75-13V score. Lt. C. E. Orr won the 200 yard standing match with 98-3v. Sgt. H. W. Hankins won the 20 shots at 600 yards, prone, NRA or Military rifle, metallic sights match with 100-18V. Civilian George Tubbs won the 10 shots at 1000 yards, NRA or Military rifle, metallic sights match with 50-6v. Coates Brown won the 1000 yard, any rifle, any ammunition match with 100-16V.

Threatening weather prevailed during the first two days with a couple of light showers giving some relays a slight handicap.

### SOUTHEASTERN HI-POWER REGIONAL

Army shooters made a clean-sweep win, outshooting the field of 185 competitors in the Southeastern Hi-Power Rifle Championships at Fort Benning, Ga., June 1-2.

Capt. Robert W. Lowe fired a 494-51V score to win the Regional Championship, beating his team-mate 1st Lt.



Lt. J. D. Martin, USA, overall winner of the 1957 Texas High Power Rifle Championship.

Henry R. Hall by seven V's. The next three places went to Army shooters, all with scores of 490 or better.

Cpl. Billy H. Willard topped the Service Rifle division with a 490 score. Army "Grey" team of Lt. Charles E. Orr, Sgt. Myles G. Brown, Capt. Joseph B. Berry and Capt. Lowe won the team championship with a 983x1000 score.

Florida civilian Joseph J. Ring topped sharpshooter class in six of the seven matches including the aggregate.

### NOEL A. GILLESPIE MEMORIAL MATCH

It was a cold and rainy weekend,

May 18-19, when 49 competitors gathered at the Winnequah Gun Club range near Madison, Wisconsin, to fire the 2nd annual Noel A. Gillespie Memorial Tournament. The unique course of fire (500 yards, 4 positions, any rifle, any sights) was originated by the late Dr. Noel A. Gillespie, the past president of the club and a widely known rifleman.

Ray Sturm of Milwaukee managed to stop shivering long enough to fire a 189-23V (prone 48-7v, sitting 50-9v, kneeling 49-5v, standing 42-2v) to win the match. Ray shot a 30-06 caliber Win. M70 with a Titus barrel.

Gilbert Kressin of Watertown was second with a 189-20V agg. (50-7V—50-8V—46 4V—43-1V) and Herbert Miller of Crystal Lake, Ill. was third with 188-22V, out Veeing Arden Ueek of Appleton who had 188-13V.

Other high scores were—George Bjornstad, Chicago, 185-20; Donald Reynolds, Russell, Ill. 184-15; John Rudolph, Oshkosh, 182-12; Tom Nelson (Mks.), Madison, 182-19; Henry Semrad, West Allis, 180-16.

### SPARTA-McCOY HI-POWER TOURNAMENT

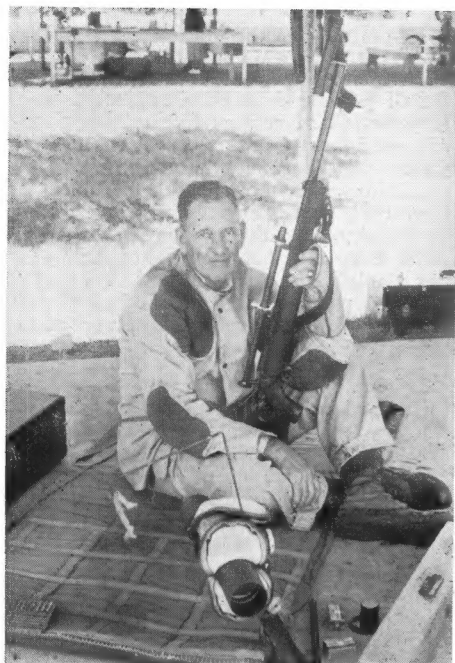
Twenty one competed in the Hi-Power Rifle Tournament at Sparta, Wis., June 1-2. Gilbert Kressin of Watertown won the aggregate with a 374-29V, just edging out John Colombo of St. Paul, Minn. with 374-27V. Thomas Kipling, USMC, Great Lakes, Ill. was third with 356-23V. Henry Woltman and Kenneth Erickson of St. Paul, missed shooting the first match but shot consistently high scores in the other four matches, each winning one match.

### CONNECTICUT SMALLBORE "PRESIDENT'S MATCH"

Ten high in aggregate

John J. Crowley	1597-120
Harold L. Slocum	1595-112
Donald B. Miner	1595-109
Lloyd L. Norton	1592-110
Priscilla Haig	1592-108
Geo. A. Mallett	1592-87
Walter Tomsen	1591-104
Martin L. Campbell	1591-81
Kermit J. Montross	1590-107
Barbara Norton	1590-96

Sixty nine competed in the 10th annual President's Match at Blue Trail Range, with John Crowley winning the President's Trophy for the second consecutive year. Crowley won the any sights Dewar with 400-31, the iron sight Dewar with 398-27. was third in 100 yds. any sights with 399-31 and 5th in 50 meters any sight with a 400-29. Donald



A. H. Fulton of Dallas, Texas, smallbore grand aggregate winner at Fort Worth, Texas, May 1957.

Miner won the 100 yd. match with 400-30 and Barbara Norton won the 50 meter with 400-36.

### SOUTHEASTERN SMALLBORE REGIONAL

Army Team member, 23 year old Sp-3 Pete Ettinger from Fort Benning, won the Southeastern Regional Smallbore Rifle championship at Winter Haven, Florida, May 25-26, with a 3193-202x score. Hollywood, Fla. shooters R. A. Ryle and T. C. Rossman were second and third with scores of 3186-211 and 3185-201. Marty Washington, a Miami high school senior, shot 3182 193 to win the Junior Championship, won the 50 meter iron sight match, and teamed with Neil Cocking of St. Petersburg to win the any sights doubles event with a 798-55X score. Gwen Rossman, Hollywood, took the woman's title with 3176-170.

### SMALLBORE AT FORT WORTH, TEXAS

#### Ten high in aggregate

A. H. Fulton	3189-222
L. H. Roberson	3188-236
R. L. Sargent	3188-223
Mrs. J. L. Greer, Jr.	3188-212
Sam Ward	3187-222
Mrs. R. L. Sargent	3187-204
F. M. Gibson	3185-229
O. H. Morris	3179-196
R. F. Henderson	3178-180
Mr. J. L. Greer	3177-194

The Fort Worth Rifle & Pistol Club held their annual "Spring Roundup" smallbore rifle tournament May 18-19 with 45 competitors from Texas, Oklahoma and Louisiana. Good shooting conditions throughout the two days, made interesting by the shifting mirage and breezes.

The aggregate winner, A. H. Fulton, won only one fired match in the two days (50 meter any), and a second place was the best he did in any sub-aggregate, but consistent shooting brought him out on top in the long run.

Lynn Roberson of McAlester, Okla. won the 50 meter iron, 50 yard iron and the any sight Dewar. A. L. Simmons, Walter Womack, R. L. Sargent and F. M. Gibson each made one match win.

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L. B. ROTHSCCHILD, Dept. P-7, 4504 W. Washington Blvd., Los Angeles 16, Calif.

### EL PASO, TEXAS PISTOL MATCH

#### High nine in aggregate

W. C. Joyner	1429
W. T. Toney, Jr.	1427
Pres O'Gren	1416
Norbert Tesch	1351
E. H. Garcia	1342
Gregg Breitegan	1309
Odin K. Powell	1305
Gus A. James	1299
Abel E. Romo	1296

The June pistol match of the El Paso Pistol Club had 39 competitors shooting the 90 shot course with one gun and the NMC with the other two guns.

### DENVER, COLORADO PISTOL

#### High in 3 gun aggregate

Earl Narverud	1363
Leonard Richardson	1315
Walter Nelson	1313

#### High in .22 cal. aggregate

L. M. Gard	1307
Nolan	1304

A fine Sunday, warm with no wind, after nearly a month of foul weather Sundays, brought out 19 shooters for the Denver Area June pistol match on the 2nd. The 90 shot course was shot with center fire (nearly  $\frac{3}{4}$  of the competitors shooting 45's in this), plus the NMC with each .22 and .45. Those shooting only .22 fired the same course but all with the .22.

### PENNSYLVANIA HI-POWER LEAGUE

Eighteen 6 man teams plus ten individual shooters made a record entry in the first match for the Western Pennsylvania Hi-Power Rifle League on the Altoona Rifle & Pistol Club range, May 19th. The Altoona No. 1 team won the match with a 1163 score over DuBois No. 1 with 1120. Due to the large entry in the league this year all matches will be fired on the Altoona range.

### CONNECTICUT BIG BORE LEAGUE

A total of 322 shooters representing 32 teams fired in the second Conn. Big Bore Rifle League match on June 9 on Blue Trail Range. Roslyn Rifle Club from Long Island are undefeated for the two first matches, this time shooting a score of 611 x 625 and beating the Torrington, Conn. team by 6 points. W. Horvay of the Torrington team had high individual score of 124 X 125. Ed Hogan of Quinnipiac shot a 123.

### CAST JACKETED BULLETS

By Kent Bellah

Does the title sound impossible? It's true, at least for jacketed Jugular revolvers. (Continued on Page Seven)

## MAKE YOUR OWN AMMO!

With the cost of factory ammo ever increasing, more and more shooters are becoming ardent handloaders. And of these, more shooters insist upon C-H Reloading Equipment than any other brand. Why? Because C-H enables you to produce consistently perfect ammo every time and to your own specifications. And what economy! You can reload a 30-06 shell for as little as 3c and save as much as 18c on every round. Whether it is reloading brass or shot gun shells, C-H has the tool for you both in performance and price.

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## BALL POWDER

By Fred W. Hallberg

It is over two years since I have had any direct contact with ball powder and I have, of course, no test figures available to me at this writing. Nevertheless, the query on ball powder in your May issue has prompted me to further confuse the issue by adding my own comments to it.

Let us start with the proposition that fundamentally all modern propellant powders, including ball powders, are chemically the same. Even the slight division into the two classes of single and double base powders does not change that statement to any great extent. Most of Dupont's powders are single base and most of Hercules' powders are double base. I do not know whether ball powder would be considered single or double base.

The most important difference in all pistol, rifle, or 16 inch gun powders is the physical size or shape of the individual grain or pellet. Each of these pellets can be visualized simply as a solidified piece of gas that can readily be converted by the application of heat and flame. Therein lies our problem.

A mild rain can erode a hillside quite badly. To erode a modern steel gun barrel, large quantities of heat and pressure are required. Theoretically, abrasion from unburned solid matter within the hot gas stream should also play a part but the effect is quite negligible. That leaves heat as the major villain in the act. Without heat the surface molecules would not be softened to the extent required by the gasses to dislodge them.

Ball powder does burn more coolly and, therefore, there is less barrel erosion when it is used. I recall one time trying to get a rough estimate on the relative difference in the rate of heat development in a barrel when using ball, versus conventional, powder. Two .50 caliber machine guns were chosen because the barrels were larger and therefore easier to work with. These guns had 36 inch barrels. Two shallow holes were drilled into the top surface of the barrels—one hole twelve inches and the other twenty-four inches forward of the breech. (It would have been better to have had the second hole closer to the muzzle but the barrels operate in a heavy perforated sleeve and the locations chosen were most convenient for our purpose.) The ends of a thermo-couple were then bottomed in each of the holes and securely fastened by means of rings. Since the barrels reciprocate violently when fired, a proper amount of loose wire had to be fed into the space between the barrel and the sleeve. One hundred round bursts were fired. To get the rate of temperature increase, it was only necessary for an operator with a stop watch to observe the movement of a dial in an instrument calibrated to Fahrenheit degrees. I do not recall actual figures involved but I do remember that approximately 25 percent more time was required to bring the barrel to a given degree of heat when using ball powder than was the case when using conventional powder. In other words, approximately twenty-five percent more ball powder cartridges than conventional cartridges could be fired before the barrel reached a particular heat level. Translated into barrel wear, we can say that the use of ball powder should increase barrel life by

twenty to twenty-five percent. This was an extreme test. If the barrel is never permitted to become really hot, and I cannot imagine a target weapon being so used, barrel life can become still greater. My guess would be that it could reach a figure as high as 33 percent.

If we are to assume that ball powder is not very different chemically from conventional powder, why should it generate less heat in the barrel? This writer does not presume to know the answer but that is no reason why we should not try to think our way through the problem and let the verifying experiments follow where and when they will.

Nowhere is the old adage "Give and Ye shall receive" more true than in the science of physics. Perhaps most often we hear it stated as "Nothing is given for nothing." Now then, what is the price we pay for cool burning? We must have some heat to generate the gas and pressure that will produce the necessary velocity. Perhaps the heat generated by ball powder lasts for a shorter period of time. Is it possible that the heat cycle is similar to that experienced when we fire reduced loads made up of pistol powders? The answer to that question can easily be determined with proper laboratory equipment but I do not know of anyone who has attempted to find out. Our slow burning, long heat lasting powders, have an anti-knock quality (very similar to certain types of our gasolines) which permit the pressures to be spread over a greater time cycle within a greater area. If we shorten that cycle, while at the same time retaining the same energy, pressure waves can conceivably be set up within the chamber and throat of the weapon and, if they are repeated often enough, they can have a peening effect on the chamber wall. The precise localities will change in accordance with the particular load used. If continued over a long enough period of time, the peening effect should appear in the chamber as a small ring usually at or about the locality adjacent to the case mouth. The ring should be similar to that produced when we try to shoot out a stuck bullet by firing another bullet behind it.

Now let us not forget that all of the above is supposition and it must await verification or rejection by competent investigators. Let us also not forget that the machine gun test described above was conducted more than two years ago. Ball powder is a new product and as such we expect constant improvement. However, no new ball powders are available to the average reloader and he must therefore rely entirely on reclaimed powders of unknown vintage.

Barrel life plus the fact that the powder flows readily from a measure, are two factors that can be chalked up on the credit side of the ledger. On the debit side we have an uncertain price to pay for that cool burning quality. A second debit factor seems to be the lack of consistent accuracy. If our purpose in using ball powder is to hit something in the far off distance, we shall find ourselves doomed to disappointment. Oh yes, an occasional good group will be produced and I have even known cases where ten good groups have been produced, but that is the apparent limit with the powder currently available to every one. That statement is made in face of the fact that I have personally used .30 caliber Super-Match cartridges at Camp Perry that were loaded with ball powder

and that were as accurate as any cartridges I have ever had the pleasure of using in competition. But I would not be surprised to learn that that particular lot of powder had been subjected to a long period of exhaustive selection and blending, a procedure that would not prove feasible under normal commercial conditions. It seems reasonable to believe that such accurate results will never be obtained by the average hand loader until the manufacturer makes ball powder available in canister lots. When that happens we shall know that ball powder has reached an acceptable standard of uniformity.

I have seen what appears to be three different types of ball powder. One consisted entirely of extremely small grains such as is generally found in carbine cartridges. The second seemed to be a rifle mixture of many different grain sizes. The third looked as though the grains had been flattened by running them under a roller. Let us eliminate the last because it appears that the flat type might have been designed for ultra fast burning, such as blank cartridge use, and therefore dangerous when used with a bullet. Or, it is possible that the flat grain was designed for shotgun work. In no case should it be used in a rifle.

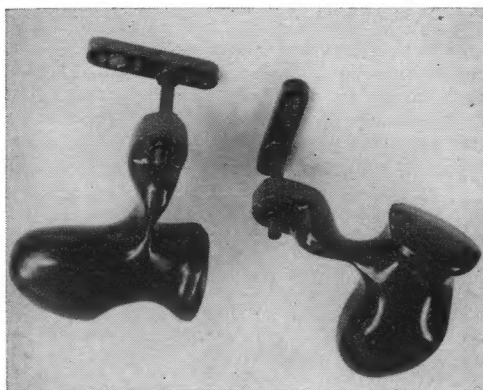
One way to control the burning rate of conventional powder is by means of grain size and shape. A cylindrical powder grain with a hole through the center can be expected to give off a constant amount of gas because, as a grain burns, the outside becomes smaller and the inside becomes larger. When a ball burns, the size can go in only one direction and that is down. To overcome this situation, two courses are open to us. We can mix the powder lot with different size and different weight balls or we can build up the ball with layers of material that will burn at different rates of speed as we approach the center. I do not know if anyone has succeeded in building up a ball in such fashion. But I do know that the mixed ball type does exist and that it is a most exasperating product with which to work.

How do we separate big pebbles from little pebbles?—We place them in a box and shake well. The big pebbles rise to the top. The little ones sink to the bottom. This can also happen to ball powder that is made up of different size or different weight balls. With such powder it is easily possible to load different cartridges within the same lot with different proportions of different sized balls. The result should be comparable to making up a duplex load of 4198 and 4350 powders but having different proportions of each in different cartridges. To make matters worse, the tiniest balls may slip through the flash hole into the primer pocket. That makes the result even more interesting. Of course, we can prevent entry of the powder into the primer pocket by placing a thin disk of cellophane in the bottom of the pocket when inserting the primer. That is troublesome and it is quite a trick. I have done it but I would rather not.

In looking at ball powder in this very prejudiced way, I hope you will forgive me if I suggest that all reclaimed ball powder should be dissolved and used for lacquer. At least the coating which it will then produce will be a lot more uniform than the groups which the present day hand loader can expect from it. Yet it must not be forgotten that ball

## a NEW PALM REST

### THE OFFSET MODEL



Naw, it don't fly. Couldn't figure any other way to show my new under-slung palm rest, to be called the Offset Model. Made of solid aluminum, can be attached to any type base. Mounting screws for S & L and Lion available. Not only the best-feeling palm rest made, but also useful for cracking ice, mashing potatoes, hammering front sights loose, and holding up press cameras. \$13.00 Ppd. with base & screws as illustrated. Finnish Lion, Walther .22 free rifles in stock. Write for lists.

**ROY F. DUNLAP, GUNMAKER**

2319 FT. LOWELL ROAD  
TUCSON 11, ARIZONA

powder is a new product and that it can be produced at a considerably lower price than other currently available powders. For that reason alone, if for no other, we hope the sponsors will be successful in their work and that they will soon come up with the first real improvement in cartridge propellents that we have experienced in the past forty or fifty years. But, in the meantime, the handloader who is seeking accuracy will be wise to stick by his tried and proven propellents.

#### THE SHOP

By Roy F. Dunlap

Getting hard to think of interesting tidbits for this here column. Without getting into commenting on new bullets, barrels, etc., what don't entirely belong.

One comment that can work in regarding just bullets and barrels is effect of steel jackets, since for several years now good steel jacketed bullets have been used in the U. S. in nearly all calibers. This is that the barrel will wear most in the middle, leaving the throat and muzzle tighter! And is the reason why the Europeans stick to the steel and tri-metal jackets—to get longer barrel life. Tri-metal is the three layer copper, steel and nickel or copper alloy, pressed together to form thin sheets, from which jackets are drawn. Also there is quite some evidence to effect that steel gives more accurate bullet than gilding metal. Anyway, if you've been wondering about the weird appearance of your .30 bore after a few thousand Norma match bullets, it really is so.

A good item for both amateur and professional gunsmiths is a product called Tap Magic. Made for easing removal of stuck and broken taps, it proves to be tops for use as a cutting/cooling agent in finish chambering, and for tapping holes in any sort of steel. Thin as alcohol, smells like cinnamon, is not an oil. A machinist I know swears he can tap a hole with it to absolute minimum dimensions of the tap itself. This helps if you want to keep scope block and sight base screws tight!

Keeping the ignition system efficient helps guns as well as automobiles—once firing pins are polished smooth you don't have to take the bolts apart so often, but every few months soak in gasoline or sol-

vent and blow clean and dry with air hose down at the service station. Then blow thin gun oil through it. And the drag of a rough firing pin going through a Mauser sleeve doesn't help accuracy a bit, though you mustn't polish undersize. A cleanup job and a new firing-pin spring in your 52, 37 or Model 70 is liable to surprise you with a sudden increase in accuracy. For Remington 722's, you can get a 721 mainspring and sneak yourself a couple turns more—cut so you get just enough leeway to assemble firing pin with spring in it.

And it doesn't hurt to drop the receiver sights in the solvent once in a while—though you have to be careful to get oil throughout the sight afterward. As little oil as possible, that is, for oil and dirt combine to make a cutting agent as well as a mess, and the less oil you can get along with, the better.

#### Cast Jacketed Bullets

(Continued from Page Five)

ver bullets in 38/357 and .44 calibers. It works like this: Jim Harvey, Lakeville Arms, Lakeville, Conn., who developed the high velocity and accurate Jugulars, designed moulds to cast the formed cores. A special \$3 die seats the cores in jacket, which is crimped on the core with a \$15.75 Harvey Canneluring Die. That's all there is to it, and the bullet is ready to load without sizing or lubricating.

So far as I know, the idea is something new. Lyman makes the special moulds for Lakeville Arms, who sell them at the standard price for the regular line of Lyman moulds or blocks in single or double cavity or hollow point designs.

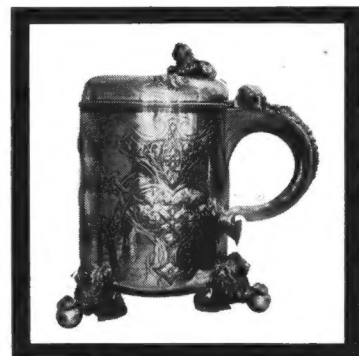
Jugulars will continue to be supplied as factory swaged bullets, and so will swaging dies. There is no advantage in cast Jugulars, except the much lower price of equipment. Swaged bullets, in both factory and home swaged types have been the ultimate in perfection, and still are. The quality of these cast Jugulars will depend on how well the casting is done, just as with any other bullet, but the jacket does make minor defects less important than with conventional plain base designs. I doubt that one shooter

(Continued on Page Twelve)

## the Historic WIMBLEDON CUP

awarded to F. B. Conway, Jr., USA

1955 and 1956



The Wimbledon Cup Match has been the supreme test of long range marksmanship since 1876 when the cup was placed in competition at NRA matches. 20 shots at 1000 yds. is the present course of fire.

The Wimbledon Cup was presented first on July 21, 1875 by Princess Louise, daughter of Queen Victoria, on behalf of the Nat'l. Rifle Ass'n. of Great Britain to the visiting American Rifle team.



**TWO TIME WINNER**  
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won the Wimbledon Cup  
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4350 and SIERRA  
MATCHKING  
BULLETS in a  
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FOR TARGET OR GAME

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# National Bench Rest Shooters Association, Inc.

## STOOL SHOOTIN STUFF

Dear Phil:

It was nice to get your letter saying that the two new aggregate records had held up. I really feel that I was indebted more to the kindness of the weather man at the Plainfield Shoot than I am to my own ability as a shooter but, nevertheless, it is nice to have the scores confirmed. I certainly agree that the measuring device demonstrated quite clearly its uniformity. Ed McNally had sent me a copy of the figures as measured by the different judges and I concur with his statement that "the uniformity was really amazing." It leaves a pretty good feeling in a fellow, Phil, when he is convinced that the measuring is not just a hit or miss proposition, and the Plainfield boys should not be left out of the picture. The accuracy of their measurements in view of their limited experience is certainly something to be proud of, and this alone will make the boys (and girls) who shoot at Plainfield very confident that they are getting good accurate measuring, and as you and I well know, getting it very promptly.

You will undoubtedly have all the news that is necessary about Johnstown. The weather man did not cooperate with us too well and there were some pretty big groups on the wailing wall. It did my heart good to see Bill Cotter come back into his old competitive form. He just sat up there and shot without letting anything bother him, and of course Clair Taylor has the same sort of disposition, and he also was out in front.

Had you heard of the target that Clair made at Olean, N. Y., several weeks before when he shot what would have been a fine new world's record, if backing strips had been available. It was typical of Clair to express himself in the way he did when he met me and talked of that target. He feels very definitely that although he lost a world's record, the game will be better off because in the future more of the smaller clubs will have backer targets. It really is pretty tough to be ruled out, but Clair took it as part of the day's fun and work, and those who were there knew that he had shot a smaller group than had ever been shot before at that distance.

While we are talking about tough breaks, I hope you have noted the 100 yard target which I have enclosed with this letter. It came to me in a letter from Bob Hart and is one of the most amazing targets that I have ever seen. It was shot by Harold Zeiser in the last 10 shot match at Wilkes-Barre, Pa. I have enjoyed shooting with Hap on a number of occasions and was present when he made his current record at Wilkes-Barre last year but I sure would like to have been there and have seen him shoot like this target shows he was shooting. I think if you can, Phil, you should reproduce this target so that the brethren who have been having tough luck with one shot sneaking out of the group can see one that is really worth crying about. Just imagine it—nine shots in .062 inch! We are getting closer and closer to the time when ten shots will go into one slightly enlarged hole.

It is interesting to hear you say that your Appel barrel still shows possibilities. I think it is about the only one I have heard of that is holding up but there

must be many that I do not know of that are satisfactory to their owners. My experience with the Johnson P. T. barrel has been very interesting, and I think perhaps I was a little stupid not to have shot it at Johnstown. I had only received it back from Bill Cotter, who had chambered it for me, a few days before the match and only had a chance to shoot it 40 times, so thought I had better wait.

I received quite a ribbing at Johnstown because Merrie Stuhlschuter did not go with me and my friends all say they did not blame her. You see the week before she had beaten me for first place in the five shot aggregate at Southboro, Mass. The next day I took her rifle apart to use the Johnson P. T. barrel on the John Warren strongback action and stock. I think I told you before how good a deal such a setup is. It was only necessary to screw the old barrel out and put the Johnson in; that is, of course, giving due credit to Bill Cotter for his chambering and barrel threading work. He never saw the complete rifle until Johnstown, and when I received the barrel from him, it fitted as perfectly as though it had been at his shop and assembled there. I think I was not worried for a minute but Bill had been a little concerned. I have had about 10 of his jobs and I believe the cases are interchangeable in every instance, without resizing. Subsequent use of the gun has convinced me that my Johnson is a real hot barrel and I am experimenting with different loads and bullet sizes, and shall also trap a few bullets to see how much difference there is in the engraving from the lands on a progressive twist barrel and one of the conventional twist. I think I can also notice considerably less flattening of the primer on the P. T. barrel job when using my standard load of 26½ grains of 3031. I talked with Chet Benjamin and Harold Haynam and they are both having very good results with the P. T. barrel.

While we are talking of new things, I think an item that has pleased me more than anything for a long time is the little gadget that Don Robbins and Clair Taylor have cooked up (Taylor & Robbins, Rixford, Pa.). They have noted for quite some time that many of their rifles were coming back with considerable wear on the top of the throat. They suspected that faulty use of the cleaning rod was shortening the lives of a great many barrels. The new gadget works as slick as anything could, and so convenient to use that the \$4 which it costs isn't remembered five minutes after it is spent. I don't know what Don's official name for it is, but I guess an order for a cleaning rod guide bushing will get you one. It locks in place in a Mauser, Springfield, Model 70 or Remington with equal ease and can be left on your cleaning rod if you wish. There is a little felt washer that wipes all the grit off the rod as it passes through the bushing, and if you don't believe that you have been passing a lot of grit through your rifle barrel on your rod, just wash out that little felt wiper in any clear solvent and see how much gunk you have picked up on the surface of your rod in a day's shoot.

I haven't found any simple way, Phil, of making larger bullets out of small ones without putting them through the die, and in the experiments which I have made, the accuracy suffered, but I

(Continued on Page Ten)

## REGISTERED BENCH REST MATCHES

### EASTERN REGION

**Staunton, Virginia:** July 27-28; October 5-6 (Virginia State Championship); Stonewall Rifle & Pistol Club, J. D. Perry, 409 Du Pont Ave., Staunton, Va.

**Plainfield, New Hampshire:** July 21; September 15; Plainfield Rifle Club, Inc., Raymond Morse, Sec'y, Plainfield, N. H.

**Augusta, Ohio:** July 20 (night shoot); September 21-22; Reed's Run Rifle Range, W. M. Brown, Box #66, Augusta, Ohio.

**Windsor, Illinois:** September 7 (night shoot); Windsor Rod & Gun Club, Junior Robinson, Windsor, Ill.

**Wilkes-Barre, Pa.:** August 10-11 (Eastern Region Championship); Wilkes-Barre Rifle & Pistol Club, William C. Deets, Sec'y, Pole 141, Harvey's Lake, Pa.

**Easton, Ohio:** August 25; Chippewa Rifle Club, Ken Adams, Sec'y, 208 Citizens Bank Bldg., Wadsworth, Ohio.

**Terre Haute, Indiana:** August 3-4; September 14-15; The Locust Grove Rifle Range, F. S. Yenowine, 1401 North 13th St., Terre Haute, Ind.

**Lewistown, Pa.:** August 17; East End Blue Rock & Sportsmen's Club, P. J. Aurand, Milroy, Pa.

**DuBois, Pa.:** August 4 (Penna. State Championship); August 30-31 and September 1-2, THE NATIONAL CHAMPIONSHIP; DuBois Rifle & Pistol Club, Inc., P. O. Box 207, DuBois, Pa.

**Greenup, Illinois:** August 17-18 (Illinois State Championship); Cumberland County Sportsman Club, H. E. Owen, Casey, Illinois.

**Baltimore, Maryland:** October 20; Associated Gun Clubs of Baltimore, Inc., James G. Hobbs, 2902 Dunmore Rd., Baltimore 22, Md.

### MID-CONTINENT REGION

**Tulsa, Oklahoma:** July 20; August 17; Aug. 31 and Sept. 1; Tulsa Bench Rest Rifle Club, R. G. Berry, Sec'y, Pawnee, Okla.

**Wichita, Kansas:** September 27-28; Wichita Bench Rest Rifle Club, A. C. Ray, Jr., Sec'y, 736 So. Crestway, Wichita, Kansas.

**St. Louis, Missouri:** September 14; Bench Rest Rifle Club of St. Louis, Tracy H. Kinkade, Sec'y, 6134 Lucille Ave., St. Louis 20, Mo.

### NORTHWEST REGION

**Seattle, Washington:** August 10-11; Seattle Bench Rest Rifle Club, Roy Meister, 7114 Greenwood Ave., Seattle 3, Wash.

### NORTH CENTRAL REGION

**Custer, South Dakota:** August 17-18; Black Hills Bench Rest Ass'n, Clair Hollingsworth, 414 East New York St., Rapid City, So. Dak.

## NEW RECORDS

The bench rest record busting this season has started out in the five shot match aggregate field.

At Staunton, Va. on April 28th, Bernice McMullen of Minerva, Ohio, shot a five 5-shot match aggregate of .2260 inch to beat the record .2758 made by Ferris Pindell in 1956. She was shooting a Hart barrel chambered for the .222 Rem. on Rem. 722 action, with Lyman 15X scope. Her load was 20.8 grs. 4198 behind 55 gr. bullets from B&A dies and Rem. primer.

Two weeks later, on May 12th at Plainfield, N. H., Crawford H. Hollidge shot a five 5-shot aggregate at 100 yds. of .2164 inch to beat the McMullen aggregate, and is the present aggregate for

(Continued on Page Twelve)





Colonel Townsend Whelen accuracy testing the .243 Winchester Model 70 Varmint rifle. Rifle shown fitted with 6X Unertl Condor scope with target mounts. May 1957.

## BENCH REST SHOOTING AND THE 6 MM's AT ST. LOUIS

by Colonel Townsend Whelen

I think that probably the range of the Bench Rest Rifle Club of St. Louis is the windiest in the country. Located on the flat and treeless bottom land of the Missouri, the wind has full sweep. Since the cold abated early this Spring, there never has been a day, or even an hour when we did not have a 15 to 25 mile wind, and almost always a fish-tail one from 12 or 7 o'clock. As a result no noteworthy small groups have been fired, but nevertheless some very creditable shooting has been done considering the conditions. Thus most of our members have become quite skilled at wind doping, and on other and less windy ranges they should hold their own in any company. In our open class matches most of our bench rest rifles are for the Wasp cartridge, although the .22-250 also has many admirers.

Our Light Varmint, and Heavy Varmint matches have been well attended, interesting and most informative. These call for 3-shot groups at both 100 and 200 yards. Many of the new 6 mm rifles are in evidence in these matches, and are gaining in popularity. Throughout the country the .243 Winchester cartridge seems to have had the most publicity, and to be the most popular, but with us we have not found any material difference between it and the .244 Remington. A number of our members are shooting the .244 Remington Standard Model 722 rifles in these matches with very excellent results considering the very windy conditions. Incidentally all have found it desirable to do certain small rebedding jobs on these rifles, but otherwise they are the straight factory rifles, fitted with scopes of course.

In these matches R. C. Gross with his .244 Remington has recorded 3-shot groups at 100 yards measuring .690, .910, .570, .830, .573, 1.485, 1.255, (the wind got him), .262, 1.170, .870, and .670 inch. And at 200 yards 2.125, 2.045, 1.880, 3.890, 2.840, 1.655, 2.030, 2.320, 3.055,

3.070, 1.630 and 3.870 inches. His load was the 75 grain Sierra open point bullet, 43 grains of 4895 powder, and Federal primers.

Arthur J. Freund, Jr., a 15 year youngster, also shooting a standard .244 Remington with 6X Weaver scope has shot 100 yard groups of .310, 1.011, 1.570, and 1.485 inches, and 200 yard groups of 4.470, 2.755, and 2.077 inches. His load was also the 75 grain Sierra hollow point bullet and 41 grains of 4895 powder. This powder charge was the maximum in his rifle, as even it gave a trace of sticking cases, thus showing the difference between two barrels of the same make.

Marlin Gray, our President, has been shooting his .243 Rockchucker rifle in these matches. His groups at 100 yards have measures .762, .875, 1.035 and 1.230 inches, and at 200 yards 2.035, 2.030, and 1.650 inches. His is a light 8½ pound rifle with custom stock, and his load the 75 grain Sierra hollow point bullet and 42.5 grains of 4895 powder.

While these groups do not appear particularly noteworthy in light of those that readers of PRECISION SHOOTING have been accustomed to seeing recorded, nevertheless they are really excellent considering the conditions under which they are shot, wind always likely to pertain in western varmint hunting, and these rifles should certainly prove very excellent for hunting.

As for myself, I have been doing a lot of shooting, mainly in practice, with my new .243 Winchester Model 70 Varmint Rifle (26" medium heavy stainless

barrel, sporting factory stock, and my 20X Lyman scope). When the rifle came I found a rebedding job advisable, so Art Freund, a member of the club did it with Herter's glass for me, leaving the barrel free floating, and his job was the best I have ever seen done. My handloads are all in Western cases, Winchester 120 primers, and all bullets (all having the same ogive) seated to an overall length of 2.75 inches, which just does not touch the lands, and will feed through the magazine. I give the results of the 100 yard shooting in the mean verticals and mean horizontal of all the groups fired with each load, so that the influence of the strong and constantly varying winds can be appreciated. All are 5-shot groups.

At 200 yards with the above 75 grain Sierra load I have had two groups, 5 shots each, 1.12" and 1.470", both possibly lucky groups considering the wind. When this load is zeroed to strike point of aim at 100 yards, the drop of the bullet at 200 yards is 2.10 inches; this with scope axis 1.5 inches above bore axis.

I have never had a rifle which so consistently shot all its loads to the same point of impact as this .243 Model 70 Varmint rifle. All of the above shooting was done with the scope adjusted to the same elevation, and all the bullets, 180 shots in all, with the exception of 6 shots, are in a 2-inch circle, the center of which is 2 inches directly above point of aim. This property, if it is true of all rifles of this model and type, should make it extremely valuable and reliable for both varmint and antelope hunting. So I have replaced the 20X scope on it with a 6X Unertl Condor scope with regular target mounts, and am hoping that this coming summer and fall I shall have opportunity to use it on varmints and also on mule deer and antelope in Wyoming. The addition of the target (not dehorned) mounts on this Condor scope makes it a dream for hunting, with accurate and recordable control of elevation and windage.

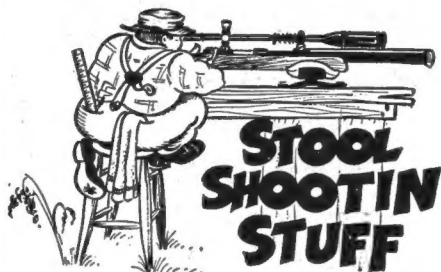
I rather doubt if the various 6 mm's will ever compete on equal terms with our .22 calibers in competitive bench rest shooting. Undoubtedly we shall get much better accuracy for them when hand made and soft swaged bullets become available, but even so the sharp and sudden (not heavy) recoil will be detrimental to best bench rest shooting. They may prove the equal of the .22 calibers at 300 meters, but in our International shooting, competing with foreign teams, it is highly necessary that our team members have a standard factory match cartridge which all can use. And the indications at present are that this International 300 meter cartridge of exceptional accuracy will be developed in 7.62 mm NATO caliber (.308 Winchester) and will become our standard cartridge for International Match shooting. But the two 6mm factory rifles now available certainly leave little to be desired for varmint and medium big game hunting.

### LOAD

Western Factory, 1957, 80 grain, 2 groups	1.47"	.90"
Western Factory, 1957, 100 grain, 4 groups	.97"	1.83"
75 gr. Sierra hollow point, 39 grs. 4895. 9 groups	.71"	1.21"
85 gr. Ted. Holmes hollow point, 37 grs. 4895, 4 groups	.92"	1.41"
85 gr. Sierra soft point, 37 grs. 4895. 2 groups	.90"	1.24"
85 gr. Sierra soft point, 44 grs. 4350. 5 groups	.74"	1.43"
100 gr. Sierra Spitzer, 40 grs. 4350. 4 groups	.81"	1.60"
100 gr. Sierra Spitzer, 44 grs. 4831. 6 groups	.91"	1.51"

### AVERAGE FOR 5-SHOTS

Vertical	Horizontal
1.47"	.90"
.97"	1.83"
.71"	1.21"
.92"	1.41"
.90"	1.24"
.74"	1.43"
.81"	1.60"
.91"	1.51"



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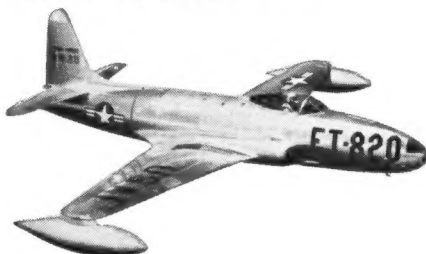
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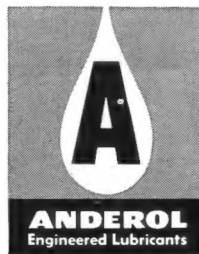
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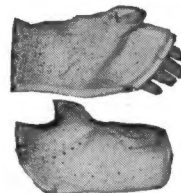
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## Stool Shootin' Stuff

(Continued from Page Eight)

can tell you of a simple way of making larger ones smaller in which there appears to be very little loss of accuracy. Of course, the "Stool Shooting Slave" may have something else to complain about because it entails heating the bullets slightly. The cooky tray with the bullets carefully lined up in rows, resting on their bases, will serve as a container for several hundred of them as you slide them in the oven but, brother, it is a job to keep the bullets from falling over as you put them on the rack. The trick is to heat the cores inside of jackets sufficiently to permit all stressed jackets to close up on the stress relieved cores. The electric toaster isn't too bad a gadget to do the job with but you will certainly get complaints from the slaves if you don't put the bullets in a little wire container, screen or glass cloth envelope as you heat them in the toast compartments. It wouldn't take many bullets down in the toaster to get you in quite wrong in the household. Incidentally, this action takes place normally on a much more limited basis as bullets age. Ed McNally was showing me some that had dropped a full .0002.

I made a little gimmick of Paul Gottschall's design that has pleased me very much. He takes a piece of old barrel stock or similar steel about 1 1/4" in length and runs a #4 taper pin reamer in on one end until his 22 calibre cases will just tightly enter the hole after being fired. He then runs the reamer down into the cylindrical stock until it takes out just what he wishes for the proper tension on his bullets when the case has been resized. It is about as slick a way as I know of to ream out some of that excess brass that is on the thick side of most cases. It makes the inside of the case neck pretty nearly concentric with the outside, and even if you want to outside trim the necks, Paul's system is advantageous. Incidentally, that new Forster gadget for outside trimming the necks is a mighty precise little instrument.

It has been often said that confidence in one's equipment is of great importance in shooting and all of the above little tricks are worth the effort if they improve the shooter's state of mind.

Cordially yours,

*Ernest Stahlheber*



## THE INFORMATION BENCH

The Information Bench service is available to all Precision SHOOTING readers. With your questions, send a large, stamped, self addressed return envelope for a reply. Selected questions and answers, covering as wide a variety of interests as possible, will be published in these columns. Address your questions to the following people.

Bench rest, varmint and hunting rifles, accessories, handloading, components and shooting methods—**M. H. Walker, THE INFORMATION BENCH, 290 Otsego St., Iliion, New York.**

NRA and Free target rifles and shooting—**Roy F. Dunlap, 2319 Ft. Lowell Rd., Tucson, Arizona.**

Sporting handguns and loading—**Kent Bellah, Saint Jo, Texas.**

British arms and shooting—**John C. J. Knott, 2226 North Euclid Ave., Tucson, Arizona.**

**Ques.:** My problem is to set the M/722 trigger at 1½ lbs. and make it stay that way! S. J. Weatherly.

**Ans.:** DuPont Household Cement placed on the head of each adjusting screw after final adjustments have been completed should maintain the setting permanently.

It is unlikely that all M/722 rifles can be adjusted to 1½ lbs. without changing the trigger spring. Since the factory spring is a relatively stiff one designed for safety in the hunting field under all conditions, it would be advisable to replace it with a lighter spring which will more adequately return the trigger to the cocked position each time. When the pull is adjusted to 1½ lbs. with the factory spring, the last little increment of movement of the spring is being used. This is not conducive to positive action.

The trigger spring is located on the front trigger adjusting screw, the larger screw at the bottom nearest the muzzle. This screw adjusts the weight of pull by changing the compression of the trigger spring which presses against the front edge of the trigger. The amount of engagement of trigger and sear (length of pull) is adjusted at the large screw at the rear. The over-travel (or backlash as some call it) is adjusted with the small screw on top nearest the muzzle. This takes a small screw driver just over 1/16 inch wide.

The operations of adjusting are: 1) Adjust the engagement of trigger and sear by first cocking rifle by closing bolt; then, turn engagement screw (large screw at back) clockwise slowly until firing pin falls. This establishes a zero point. Now turn this screw counter clockwise about ¼th turn. Recock the rifle by opening and closing the bolt. You can now see the amount of engagement of sear and trigger by looking through the ⅛ inch hole in the side of the housing which just uncovers the engaging corners of these two parts. For a light pull these corners should not engage by more than about .010 inch (three thickness of writing paper).

2) Now adjust the weight adjusting screw (the large screw in front nearest muzzle); turn clockwise for additional weight of pull and counter clockwise for less weight. Make sure that enough spring force is available to return the trigger positively to its cocked position each time it is operated. It is possible to back this weight adjusting screw out to the point where the heavy factory spring will return the trigger only partially, causing variable pull. This is reasonable although it sounds otherwise. The high rate (pounds per inch of compression) of this spring is being used to secure a light pull. It is therefore being used outside of its useful range. When a

light pull is desired, a lighter spring with a lower rate is a necessity. The factory spring was not designed to adjust below about 3 pounds. Incidentally, if you expect to get a light uniform pull, the trigger must operate without friction or interference.

3) The last adjustment can now be made. The small screw at the top of the trigger housing on the side nearest the muzzle should now be turned clockwise until the rifle can not be fired. Then, with the rifle cocked and pressure on the trigger, turn this screw counter clockwise until the firing pin falls. Give this screw a small additional fraction of a turn counter clockwise for clearance. Not much is needed for clearance as the trigger connector, which blocks the sear into engagement with the firing pin, is only spring urged into position. As soon as the trigger is pulled and the corner of sear and connector clear each other, the sear cams the connector out of the way.

4) Now be sure that the pull is safe by slamming the bolt closed several times. If the adjustments have been made correctly the rifle will not jar off as the bolt is slammed. A light pull with short travel should not be used under field hunting conditions.

5) "Dope" the heads of all three screws with DuPont Household Cement to prevent unintentional movement.

M. H. Walker

**Ans. to Wm. Schellert:** In my opinion there is no best scope for bench rest shooting. All brands are winning. Most shooters prefer between 20 and 30 power for bench rest. In order to prevent magnification of the mirage and to give best light gathering properties, the lowest power which will do the job adequately is the best. For people with good eye sight this is about 18 to 20 power. Much less will not spot adequately at 200 yards. Much above 30 power in scopes I have seen is a detriment when the mirage is running. The new B & L BALvar 24 seems to be getting some attention. This variable power may be a good idea. I'm going to try one. M. H. Walker

**Ans. to P. Pacciarelli:** If your .244 custom job is normal, it should do very well with loads up to 43 grains of 4064 with the 70 grain or 75 grain bullets. Approximately 3 grains less of 3031 or ball powder should be adequate. Some of the tight chamber smaller bore rifles need about 1 grain less.

I personally prefer the 75 grain bullet with 42.5 grains of 4064 and the 90 grain with 41 grains of 4064. The 85 grain bullets with 41.5 grains of 4064 is one of the most accurate loads in the .244. M. H. Walker

## CHANGE OF MATCH DATE

**Eastern Region members note:** The date for the Pennsylvania State Championship bench rest shoot at DuBois, Pa. has been changed from Aug. 4 to Aug. 3, 1957. Shooting will start at 3 P. M. Saturday afternoon and continue into the evening, under lights, until the full National Match course has been completed.

This shoot is **not** restricted to Pennsylvania residents but is open to all. Only special state championship trophies and awards are restricted to Penna. residents, all other awards being open to all.

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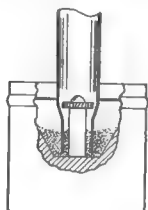
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### New Records

(Continued from Page Eight)

the course. Hollidge's 200 yd. aggregate that day of .4865 M.O.A. was beaten by three other shooters but, added to his 100 yd. aggregate, it was good enough to make him a new record for the combined 100 and 200 yard aggregate, a .3542 M.O.A., to beat the .4399 record made on this same range in 1956 by Alfred Gendening.

Hollidge shot a Hart barrel on Harold Little action chambered for the .219 Don case with a Unertl 20X scope. His load was 26.5 grs. 3031 with home made 51.4 gr. 6-S bullets.

### Cast Jacketed Bullets

(Continued from Page Seven)

out of 100 can tell any difference in accuracy, if he sorts his bullets.

It has always been true that good cast bullets are good, and that bad ones are not. A gas check base is a great help to prevent a deformed base by the sudden high pressure and hot gas caused by fast burning pistol powders. A jacket is a further aid to accuracy. A bullet that has been sized more on one side than the other is certainly out of balance, and the possibility of this fault is eliminated in the new cast Jugulars.

If one will sort out defective cores that are wrinkled, not filled out or have holes or air bubbles, the accuracy will, for all practical purposes, be very nearly as good as swaged Jugulars. As the Canneluring Dies and either a slug mould or a lead wire cutter are needed with the \$48 swaging dies, there is considerable saving in buying only the single cavity core mould blocks at \$5.50 and the special Core Seater Die at \$3. This puts nearly all of the Jugular advantages in the price range that average shooters can afford, without going all out for extra fine equipment. Harvey says, and I believe it, that the secret of cast Jugular accuracy depends much on securely crimping the jacket to the core, so it can not shed in flight. When time permits making extensive accuracy tests of swaged and cast Jugulars, the results will be reported.

### BENCH REST RESULTS

**AUGUSTA, OHIO:** Forty shot in the registered shoot at Reed's Run Rifle Range May 18-19. Robert Hart, Neco-peck, Pa., won the 100 yd. agg. with .385, was 2nd in the 200 yd. agg. with .523, and won the NMC agg. with .454 M.O.A. Paul Gottschall, Salem, Ohio, was 5th in the 100 yd. agg. with .463, won the 200 yd. agg. with .465, and was 2nd in the NMC agg. with .464. The shoot was labeled by some as "The battle of Deputy Directors."

D. C. McLaughlin, Homeworth, Ohio, was 3rd agg. at 200 yds. with .563 and 3rd in NMC with .507. Edward Deem, Industry, Pa., was 2nd in 100 yd. agg. with .441 and Bernice McMullen, Minerva, Ohio, was 3rd with .442. Deem was 4th in the NMC with .547.

Hart and Gottschall both shot the Rem. .222 in Hart barrels. Both McLaughlin and Deem shot Douglas barrels—Deem in .219 Don and McLaughlin in .222 Rem.

**TERRE HAUTE, IND.:** Twenty one shot in the registered matches at 100 yds. at Terre Haute, Ind., May 25-26. Five 5-shot and five 10-shot matches were fired each day. Ferris Pindell was the winner on Sat. with .221 for the 5-shot agg. and .354 for the 10-shot agg. W. M. Brown, Augusta, Ohio, was 2nd with .2524 and .427. Ted Holmes, Mattoon, Ill. was 3rd with .325 and .4174. Robt. Graham, Ohio, 4th with .3556 and .406.

Sunday, K. A. Wildason of Dayton, Ohio, shooting in his first registered bench rest match, topped the field with a 5-shot agg. of .264 and 10-shot agg. of .407. L. E. Wilson, all the way from Cashmere, Wash., was 2nd with .339 and .348. Graham was 3rd with .280 and .414, and Pindell was 4th with .299 and .403. Gottschall shot smallest 5-shot group of .132 and he, W. M. Brown and Bob Sherer each shot a .240 10-shot group. Sherer was shooting a .20 cal. rifle.

**SAN ANGELO, TEXAS:** Twenty seven shot the unrestricted rifle matches and two the Varmint Rifle class matches in the Texas State registered bench rest matches at San Angelo, June 1-2. Robt. W. Smith of Dallas was the over-all winner with a NMC agg. of .597, placing 4th in the 100 yd. agg. with .536 and winning the 200 yd. agg. with .657. C. C. Robinson of Houston was 2nd at 200 yds. with a .739 ave. and 2nd in the NMC with .673, while the Mrs. (Sue) made it a family festive event with a 3rd place .530 at 100 yds., 4th place .832 at 200, and 3rd in the NMC with .681. H. E. Powers of Okmulgee, Okla. was 3rd at 200 with .790 and 4th in the NMC with .688.

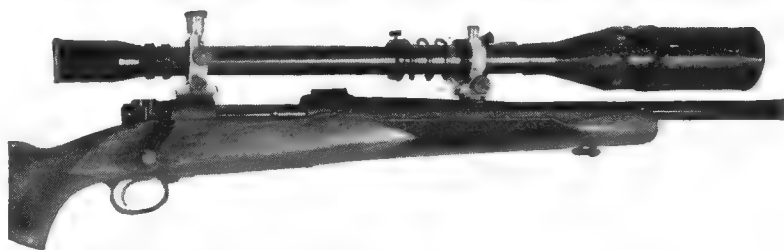
Ferris Heffington of Corpus Christi won the 100 yd. agg. with .481 and was 5th in the NMC with .690. Newly elected Gulf Coast Region Director, Coleman Brown of Corpus Christi was 2nd in the 100 yd. agg. with .526.

The three top ranking NMC shooters all used the .219 Don cartridge, but in Apex, Douglas and Hart barrels, and on Mauser 98, Springfield and S&L actions.

**SOUTHBORO, MASS.:** Fourteen shot four 5-shot and four 10-shot matches in the unregistered shoot at Southboro, Mass., May 26th. Crawford Hollidge won the grand aggregate with a .4262 ave. Bob Stinehour was 2nd with .4450 and Mary (Mrs.) Hollidge 3rd with .4468. Mrs. Hollidge had small agg. for the 5-shot matches and Bob Stinehour was the 10-shot agg. winner.

(Continued on Page Fourteen)

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Cartridge	Primer No.
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22 Savage	210
220 Swift	210
243 Winchester (6 m/m)	210
25 Remington	210
25-35 Winchester	210
250 Savage	210
257 Roberts	210
270 Winchester	210

7 m/m Mauser (7x57)	210	405 Winchester	210
30-30 Winchester	210	45-70 Government	210
30 Remington	210		
30-06 Springfield	210		
30-40 Krag	210		
300 H & H Magnum	210		
300 Savage	210		
303 Savage	210		
303 British	210		
308 Winchester	210		
32 Winchester Special	210		
8 m/m (7.9 m/m) Mauser	210		
8 m/m Lebel	210		
32 Remington	210		
32-40 Winchester	210		
33 Winchester	210		
8 m/m Mannlicher-Schoenauer (8x50)	210		
8 m/m Mauser (8x57; or 7.9)	210		
348 Winchester	210		
35 Remington	210		
358 Winchester (8.8 m/m)	210		
375 H & H Magnum	210		
38-55 Winchester	210		
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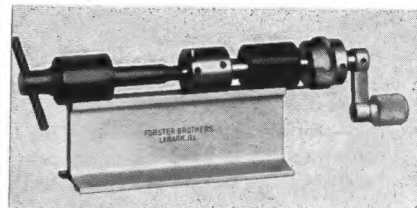
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● H. L. Culver of Silver Spring, Md. set a new world official record of .4016 inch for 10 shots at 200 yards at DuBois, Pa. in May. First time EVER that this match went to the same make of barrel two times. Former record held by Sam Clark, Jr., group .5276 inch, set in 1954 at DuBois.

● Julia Culver, 14 year old daughter of H. L. Culver, shot second place in the 100 yard aggregate at Reed's Run Rifle Range in Augusta, Ohio with an average of .309 inch for the ten 5-shot matches (50 shots) over 30 of the East's best shooters. Linus Douglass won the aggregate with .301 inch average.

● Linus Douglass and Homer Culver ran neck and neck in several matches such as DuBois, Pa., Altoona, Pa., Lewistown, Pa., to take important places in aggregate scoring—Douglass taking 3 second aggregates in a row—and Culver taking the 200 yard aggregates in two instances, as well as the grand aggregate in two instances. Culver shot a chrome-Moly barrel 2 years old and Douglass shot a stainless barrel sold and fitted in 1956.

**G. R. DOUGLAS**  
5504 Big Tyler Road

Other wins were scored in Bench Rest matches too numerous to mention by such fine shooters as Al Creighton, Sam Clark, Wm. Brown and many, many others.

● M/Sgt. Francis Conway, Jr. of the U. S. Army won the famous WIMBLEDON match THE SECOND TIME IN SUCCESSION. This being the first time a man has succeeded himself in winning this 20 shots at 1000 yards with any rifle and any sights match in 57 years. He shot the same .300 H and H rifle as he did last year.

● M/Sgt. Hankins of the U. S. Army took the 1000 yard scope sight match at Bartlesville, Okla. in early October to set a new record of 50-12V for this match. The old record was 50-7V. Hankins also shot a .300 H and H rifle.

● Further, there were many important wins by many rim fire shooters whose outfits were barreled by rim fire experts such as W. H. Womack of Shreveport, La. and Lee A. Swem of Portland, Oregon.

All the foregoing barrels were ULTRARIFLED barrels, having no additional hand treatment of any kind done on them. They were not selected in advance by trial. All were sold, or installed, by GRADE ONLY.

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### Bench Shoot Results

(Continued from Page Twelve)

**BUFFALO, WYOMING:** Five shot the "open class" matches in the Warm-Up shoot at Buffalo, Wyo. on May 26, and 6 shot the "varmint rifle" class events. No very "hot" groups or aggregates were made but an interesting point is that the top three shooters in each class were the same persons and that with the light "varmint rifles" their aggregates closely approached their heavy rifle aggregates.

**CUSTER, SOUTH DAKOTA:** Sixteen shot at the annual Black Hills BRSA registered shoot at Custer, June 8-9. C. C. Robinson of Houston, Texas won the heavy rifle NMC agg. with .6055 M.O.A. and the 100 yd. agg. with .458. Walt Siewert of Custer was 1st in the 200 yd. agg. with .692 M.O.A. and 2nd in the NMC with .663.

M/Sgt. Geo. Gleason of Ellsworth AFB won the 100 yd. agg. with Varmint rifle (5-shot matches) with .508, was 2nd in the 200 yd. agg. with .7155, and won the two range agg. with .6367. Jack Williams of Keystone won the 200 yd. agg. with .6975 and was 3rd in the grand with .7257. Bruce Pheasant of Buffalo, Wyo. was 2nd at 100 yds. with .560, 2nd in the grand with .7072, and shot the smallest group at 100 yds. of .225 inch.

The sporting rifle matches resulted in some amazing accuracy from the .243 and over cal. hunting rifles. Gleason again won the 100 yd. agg. (5-shot matches) with .496, was 2nd at 200 with .9355 and won the grand with .7157 M.O.A. Jack Williams was 2nd in the 100 yd. agg. with .529, shot the smallest 5-shot group at 100 of .240 inch, was

3rd at 200 with 1.044, and 2nd in the grand with .7875 M.O.A. C. C. Hankins of Buffalo, Wyo. shot smallest 5-shot 200 yard group of 1.08 inch and won the 200 yd. agg. with .925 M.O.A.

**WICHITA, KANSAS:** Eleven shot the NMC in the night shoot at Wichita, June 8th. Shooting conditions were exceptionally good and all were making fine groups and aggregates—the largest aggregate at 200 yards being .652 M.O.A.

Exceptionally uniform grouping at 100 yds. (smallest 10-shot group of .400 and largest .475) gave L. F. Carden of Kansas City the 100 yd. agg. win with .439. He was 3rd at 200 yds. with .532 and 3rd in the NMC agg. with .485.

E. R. Carson of Muncie was 2nd at 100 with .448, 2nd at 200 with .446 and NMC agg. winner with .447. H. W. Barton of Wichita won the 200 yd. agg. with .423 M.O.A., was 3rd at 100 with .486 and 2nd in the NMC with .454.

All three agg. winners shot the .222 cal. Carson shot a Douglas barrel while Barton and Carden used Hart barrels. Barton and Carson used Rem. 722 actions and Carden the Win. M70 action.

**SEATTLE, WASHINGTON:** The first of three monthly non-registered shoots, leading up to the registered shoot Aug. 10-11, was fired at Seattle on May 19th. Roy Meister won the five 5-shot match agg. at 100 yds. with a .464.

**RENTON, WASHINGTON:** Twelve fired in the first Varmint Rifle match conducted by the Renton Fish and Game Club, June 9th. The shoot was unregistered but fired under NBRSA rules with five 5-shot matches at each 100 and 200 yds., an aggregate for each range and a two range grand aggregate. It was not a "Big Money" match—fees were kept low and prize awards in proportion but the competition was keen, nevertheless.

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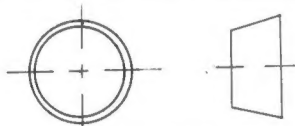


# TRADIN' POST

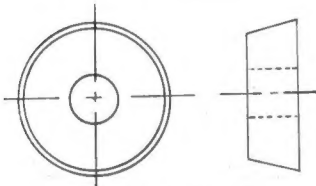
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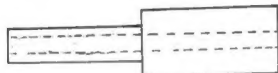
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## ARRANGEMENT TO PREVENT BLUING OF INSIDE OF RIFLE BARRELS

It seems to be generally agreed to-day that it is desirable from an accuracy standpoint not to blue the inside of rifle barrels. The sketch shows a very simple arrangement to accomplish this.

The muzzle plug and breech plug are made from neoprene, rubber approximately 3/16 inch thick. The material that I used was taken from small square neoprene rubber pads that are sold to machinery manufacturers for the purpose of spreading filler before painting. The plugs should be tapered slightly and a tight fit in the muzzle and chamber respectively. The one used in the chamber has a small hole of 1/8 to 5/32 diameter. Hard wooden plugs could probably be used, if carefully made.

The connector is made from steel and the large end is made to be a tight fit in a piece of rubber tubing 12 to 18 inches long. The small end is made to be a tight fit in the hole in the breech plug. It helps if both ends of the connector are slightly tapered.

In use, the bore of the barrel is oiled or greased with a good preservative and then the muzzle plug pushed tightly into the muzzle. The breech plug is then pushed into the chamber and the small end of the connector pushed into the hole in the breech plug. A piece of rubber tubing of the proper size is then pushed

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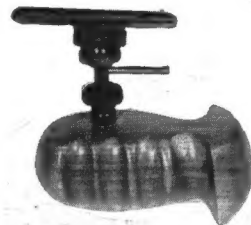
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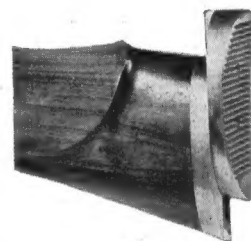


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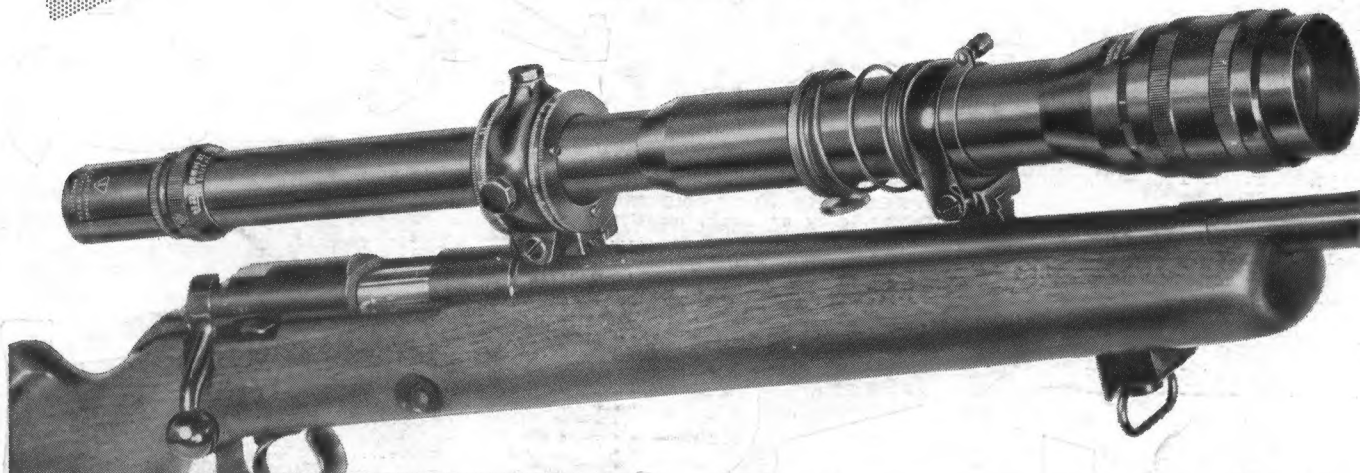
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